

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. FAA-2001-9119]

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Public Meeting

SUMMARY: The FAA announces an on-line public forum on the Internet seeking comments and information from the public regarding the government's role in supporting the U.S. commercial launch industry. In particular, the FAA is asking whether and why the government should continue to share the risk of liability for commercial launches in the unlikely event of an accident, or consider changes to existing laws. Public views obtained from the on-line forum will be included in a report to Congress on the appropriateness and need to continue current risk-sharing arrangements or modify laws governing liability risk-sharing for commercial launches and reentries beyond December 31, 2004.

DATES: A two-week on-line public forum will begin on September 4, 2001, at 9 a.m. EST and end on September 14, 2001, at 4:30 p.m. EST. Written comments may also be submitted to the docket through September 14, 2001. Comments submitted to the docket after September 14th will be considered and included in the report to the extent practicable; however, the FAA encourages timely submission of comments to facilitate preparation of the report.

ADDRESSES: The on-line public forum can be reached by clicking the "On-Line Public Forum" hyperlink on the Associate Administrator for Commercial Space Transportation's (AST) Internet home page, <http://ast.faa.gov>. Persons unable to

participate in the on-line public forum may mail or deliver views to the U.S. Department of Transportation Dockets, Docket No. FAA-2001-9119, 400 Seventh Street, SW., Washington, DC, 20590. The FAA requests two copies of any written comments.

Comments may also be submitted to the docket electronically by sending them to the Documents Management Systems (DMS) at the following Internet address:

<http://dms.dot.gov/>. Comments to the docket should be submitted by September 14, 2001. Comments submitted to the docket may be examined in Room PL 401 at the U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC, 20590, between 10 a.m. and 5 p.m. weekdays except Federal holidays, and may be viewed by accessing the DMS using the Internet cite noted above.

FOR FURTHER INFORMATION CONTACT: Ms. Esta M. Rosenberg, Senior Attorney-Advisory, Regulations Division, Office of the Chief Counsel, Federal Aviation Administration, U.S. Department of Transportation (202) 366-9320, or Mr. Ronald K. Gress, Manager, Licensing and Safety Division, Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, U.S. Department of Transportation (202) 267-7985.

SUPPLEMENTARY INFORMATION:

Background

For decades, U.S. national launch capability was attributable exclusively to government managed programs. By the 1980's, commercial opportunities in space prompted development of a private sector launch industry that would operate as a commercial business by selling launch services to customers. Customers included manufacturers or owners and operators of telecommunications and Earth observations

satellites, as well as research scientists, among others. Government policies were developed to facilitate growth of a robust commercial launch industry.

In the mid-1980's, Congress enacted the Commercial Space Launch Act (CSLA) to create the legal framework for a commercial launch industry and to sustain the momentum towards an increasingly privatized launch capability in the United States. In enacting the CSLA, Congress cited the critical importance of demonstrating legislative commitment to the emerging launch industry in order to encourage private sector investment in developing commercial launch ventures. Under the statutory framework established by the CSLA, launch authorization would be granted through a licensing program administered by the U.S. Department of Transportation (DOT). Through licensing, the Federal government would exercise safety oversight and regulatory control over private sector launches.

Progress in commercializing space access was slow, however, largely because the Shuttle was available to launch satellites as secondary payloads on advantageous terms. The Challenger disaster of 1986, and the stand-down of Shuttle service for the two years that followed, spurred development of private sector launch capability, but still at a slow rate. By 1988, no commercial launches had yet taken place. Among the reasons cited for delayed development of a commercial launch industry was the difficulty of managing the potentially catastrophic liability risk associated with a commercial launch. Insurance to financially protect an operator against the risk of potentially vast liability was not readily available. To the extent it was available, insurance was costly and market capacity extremely limited. Launch companies stated that they were unwilling to "bet the company" on each launch and without insurance could not responsibly manage the

potentially catastrophic and open-ended liability that might result in the event of a launch accident affecting a populated area. Previously, liability had been the responsibility of the Federal government. It became clear that a viable commercial launch industry would not develop in the United States without an adequate means of managing liability risk.

To address industry concerns, and facilitate development of commercial launch capability and associated insurance capacity, Congress instituted a comprehensive liability risk-sharing program through the CSLA limiting the amount of insurance a launch operator would be required to buy and placing responsibility on the government for covering excess liability, up to a set limit. The payment of excess claims provisions of the CSLA became popularly known as indemnification although the term is a misnomer. Unlike an absolute guarantee of indemnification, the CSLA provides procedures for Congress to vote to appropriate funds covering excess liability, up to a statutory ceiling of \$1.5 billion above required insurance, with an adjustment for inflation occurring after 1988 (the year the program was enacted).

Initially, the liability risk-sharing provisions of the CSLA were limited to a five year term and were due to sunset at the end of 1993. The first launch license was issued and the first licensed launch took place in 1989. By the end of 1993, 37 licensed launches had taken place and two entities held operator licenses. The concept of an operator license was developed by DOT to facilitate and streamline approvals for the conduct of launches by an operator that had demonstrated a sound safety record and launch capability. An operator license grants broader authorization than that conveyed in a single launch license by authorizing an unlimited number of launches of a class of launch vehicle by the operator from a federal launch range.

By 1993, commercial launches were occurring at the rate of one every two months, on average, and were still relatively infrequent events. That year, Congress extended the statutory liability risk-sharing program, including the indemnification provisions, for an additional six year term, through December 1999. Launch rates increased during the period of 1995 to 1999. Consideration of another extension in 1999 proved controversial and a one-year continuation was granted, allowing time for further deliberation in Congress of an additional extension. That deliberation resulted in passage of the Commercial Space Transportation Competitiveness Act of 2000, which extended the existing risk-sharing regime through 2004 and directed DOT to submit a comprehensive report on the need for maintaining the liability risk-sharing status quo. Information received in response to this notice of an on-line public forum will be used in preparing the report.

Launches conducted from U.S. facilities have an impressive safety track record, as measured by the absence of damage or loss to uninvolved persons. In fact, for licensed commercial launches, a claim for third-party damage or loss has never been made against a licensee's launch liability insurance coverage. Nevertheless, as in any business, and particularly one involving high risk explosives, the possibility of a launch accident makes insurance or other form of financial responsibility necessary to compensate potential victims and also to protect the corporate assets of launch participants. Moreover, by treaty, the United States accepts absolute liability for damage that occurs in other countries when a launch takes place from U.S. territory or facilities.

To ensure that funds will be available to compensate injured but uninvolved persons, as well as government personnel supporting a commercial launch and to ensure

that U.S. launch services providers are financially able to operate in the face of potentially open-ended liability, the CSLA divides potential liability into three layers and assigns responsibility for each layer as follows. The first layer is that which has the most probability of occurrence, although in fact no claims have ever arisen out of a commercial launch from the United States. A launch operator holding a license is required to obtain liability insurance (or otherwise prove that it can financially cover claims) in an amount calculated by the FAA based upon a risk assessment that measures, in a dollar amount, the greatest potential losses for bodily injury and property damage that can reasonably be expected to occur as a result of a licensed launch. Insurance requirements are set such that there is about a one in ten million chance that liability for third-party claims will exceed the amount of insurance the agency requires as a condition of a launch license. All participants in a licensed launch, including the payload customer and the contractors of the launch operator and the customer, as well as the U.S. Government and its contractors, are protected by the licensee's insurance coverage. Regardless of which entity involved in the launch is at fault for an accident, the legal liability of that party and the other launch participants is covered by the insurance. The injured victim will be compensated without protracted arguments over which party actually caused the injury. By law, the amount of insurance the FAA can require is limited to \$500 million but actual insurance requirements have never exceeded \$215 million for a launch.

Above the amount of required insurance set by the FAA, the CSLA places responsibility for covering claims on the government, up to a ceiling of \$1.5 billion as adjusted for inflation occurring after 1988, the year the program was enacted. As noted

above, the CSLA contains procedures whereby Congress may vote to appropriate funds to cover the liability, but it is not absolute. Above the combined amount of required insurance plus the amount paid by the government, responsibility for covering third-party claims rests with the licensee or legally liable party. Under the statutory risk allocation program just described, the government's liability exposure for the most probable claims is covered by the launch licensee's insurance at no cost to the government or U.S. taxpayer. This coverage is particularly important because the government is liable under treaties for damage or injury that occurs on the ground outside the United States, regardless of the CSLA, when launches take place from the United States. In return for industry-provided insurance, the government accepts responsibility for covering liability of involved entities and compensating injured third parties in the unlikely event of catastrophic liability in excess of required insurance. Congress has never been requested to appropriate funds to fulfill its statutory commitment.

Commercialization of U.S. launch capability has been a qualified success. Arianespace, a European launch consortium and the principal competitor of the US commercial launch industry, continues to attract a large share of the internationally competed launch market and launches of commercial satellites by Russia's Proton launch vehicle are increasing. More and more countries have developed space-faring capability and are developing national laws to address operator liability for commercially operated launch vehicles and to fulfill treaty obligations assumed by governments under the Outer Space Treaties. The U.S. risk-sharing regime has been used as model for other nations in developing risk-sharing programs under their domestic laws.

Against this competitive climate, Congress extended the existing liability risk-sharing regime for an additional five year term, calculated from the 1999 sunset date. Congress will need to consider whether to extend the regime beyond the current sunset date of December 2004, and if it declines to act the indemnification provisions will end under the terms of the existing law. In granting the extension, Congress directed the Department of Transportation to study the need for continuing the status quo with respect to liability risk allocation, and to consider whether modifications may be appropriate. In doing so, it would appear that, for Congress, questions remain unanswered as to the continuing need for the liability risk-sharing regime. In the Commercial Space Transportation Competitiveness Act of 2000, Congress has detailed specific issues associated with launch liability and risk allocation that must be addressed by the comprehensive report, and they can be viewed at the AST Internet home page, <http://ast.faa.gov>.

A portion of the report will be dedicated to presenting the views of the interested public. The interested public includes the launch services industry and its satellite customers and suppliers, as well as associations and interest groups dedicated to space-related issues. But the public is not limited to entities directly involved in launch services or the space industry. A robust U.S. commercial launch industry enables many industries and services for consumers. Today, commercialized utilization of and access to space is credited with enabling associated consumer services such as telecommunications, mobile data, direct-to-home television, remote sensing and related processing, as well as distribution industries. According to an AST report issued February 2001, "The Economic Impact of Commercial Space Transportation on the U.S. Economy," U.S.

economic activity in 1999 linked to the commercial space industry totaled over \$61.3 billion.

Because the benefits of space are widespread, and because so many people are interested in space travel and exploration, both as taxpayers and as future adventure travelers, the FAA seeks views from any and all interested persons, including consumer groups, persons and commercial entities. The FAA also seeks the views of persons who may have more particularized interest in understanding how launch liability is managed, such as those persons living in the vicinity of launch sites. Population growth in the communities surrounding the most active U.S. launch sites, such as Cape Canaveral Air Force Station in Florida and Vandenberg Air Force Base in California, demonstrates confidence in Air Force range safety management in particular, and launch safety technology in general.

This is the second opportunity provided by the FAA for the interested public to provide its perspective, using the Internet, on the appropriate role of government in risk management for commercial space transportation and associated issues concerning U.S. policies in support of a robust commercial launch industry. A docket also remains available for filing written comments, either by mail or electronically, following the instructions listed above under the heading, "ADDRESSES."

The on-line public forum will allow electronic discussion of the issues identified for analysis by the Commercial Space Transportation Competitiveness Act of 2000. Through the Internet, a large cross-section of the interested public will be able to share views and information with each other and the FAA, and assist the FAA in compiling the

range of perspectives concerning an appropriate risk-sharing regime for commercial space transportation.

There are two sets of questions. The first set of questions asks, in a general way, for public views concerning government support of the commercial space launch industry. The second set of questions repeats the questions posed in an on-line public forum held April 27-May 11, and addresses the specific elements Congress has required the FAA to study in preparing the report. At the end of the questions, the FAA provides a more “free-style” opportunity for submission of views on matters related to launch liability, risk management and government policies in support of the U.S. commercial space launch industry.

If you would like to participate in the on-line forum, you are not required to answer all of the questions and you are not required to respond to all parts. You may answer as few or as many of the questions as you like, in either or both parts, as well as in the “free-style” section. You may choose to respond only in the “free-style” section and skip over the two sets of questions in Parts I and II entirely. If you choose to respond to a question, please be specific in your answer so that it is clear to the FAA and others who may view the on-line public meeting. To the extent you can, please provide supporting information and the rationale for your answer.

Part I

There are eight questions listed in this part. You may answer none, some or all of them, and then proceed to Part II.

1. Before reading this Notice, were you aware that a commercial launch industry exists in the United States, in addition to government launch capability (e.g., military space programs operated by the Department of Defense and civil space programs administered by NASA), and that private companies offer launch services as a commercial business?
2. Is it important to you that the United States have a successful and internationally competitive commercial launch industry with a significant, if not majority, share of the international launch market, and if so, why? Do you believe there is a benefit to our nation from having a robust commercial launch industry and from being a well-established world leader in space?
3. Before reading this Notice, were you aware that the FAA licenses and regulates commercial launches in the United States?
4. Before reading this Notice, were you aware that launch operators licensed by the FAA are required, by law, to maintain a prescribed amount of liability insurance?
5. Before reading this Notice, were you aware of the government's involvement in providing coverage, that is, "indemnification," for excess liability over and above that which is covered by the liability insurance a launch operator is required to purchase when conducting a licensed launch in the United States?
6. A government-industry risk sharing arrangement, such as that reflected in the CSLA and described in this Notice, may be unusual for a commercial industry, but it is not unique. For example, indemnification of excess liability is credited with enabling commercial development of the nuclear power industry. Do you think it is important and appropriate for the government to continue to support the U.S. commercial launch

industry by having some type of liability risk-sharing program, such as the one described in this Notice, and can you state why?

7. Other governments financially support their launch industry through indemnification commitments. For example, the French Government is responsible for paying damages awarded to victims of Arianespace launches in excess of the insurance obtained by Arianespace. Do you believe that the U.S. Government should continue to have policies and laws, such as the CSLA risk-sharing program described in this Notice, so that U.S. companies can compete on similar terms against their international competitors?

8. If you answered “yes” to Question 7, above, under what circumstances do you believe the U.S. Government should or could stop supporting the U.S. commercial launch industry through risk sharing? What criteria (e.g., market share, technological success, other considerations) would you use in deciding that a risk-sharing arrangement between government and industry is no longer necessary or appropriate?

Part II

Reprinted below are the questions presented in the first Internet public meeting, conducted April 27-May 11. You may answer none, some or all of them, and then proceed to Part III.

1. Could the U.S. commercial space transportation industry compete effectively against non-U.S. launch providers without the existing liability risk-sharing regime?

2. Are the liability risk-sharing regimes of other space-faring countries relevant to the competitiveness of the U.S. space transportation industry? Are there specific

elements of particular foreign regimes that you believe provide advantages or benefits to entities that fall under those regimes and the ability of non-U.S. launch providers to compete internationally?

3. Does holding a launch operator strictly liable for the damage or injury that results from its launch hinder the commercialization of space launch capability?

4. By treaty, the U.S. Government accepts absolute liability for damage on the ground or to aircraft in flight outside of the United States when a launch takes place from U.S. territory or facilities. Given the Government's obligations in this regard, does the existing liability risk-sharing regime provide adequate coverage and financial protection for the commercial space transportation industry as well as the Government?

5. U.S. and foreign air carriers operating in the United States are required to maintain insurance coverage in certain minimum amounts covering liability to passengers and persons and property on the ground. For aircraft with more than 60 seats or more than 18,000 pounds of capacity, carriers must maintain third-party accident liability coverage in the minimum amount of \$300,000 for any one person other than a passenger and a total of \$20 million per involved aircraft for each occurrence. There is no government indemnification in the event claims exceed that amount, nor does the U.S. Government accept treaty-based liability in the event of such damage. At what stage of development and under what circumstances should the airline liability regime become a model for commercial reusable launch vehicles (RLVs) that will routinely take-off and land?

6. The Federal Government's current indemnification policy does not cover risks associated with commercial spaceport operations that do not involve launch vehicles. Do

commercial spaceports require a liability risk-sharing regime comparable to that utilized for licensed launches and reentries, even when there is no vehicle-related activity taking place at the spaceport?

7. What factors should the U.S. Congress consider in determining whether to continue as-is, or modify, existing laws in terms of liability risk-sharing for commercial space launch and reentry activities?

8. What suggestions to you have for modifying the existing liability risk-sharing laws applicable to commercial launch and reentry activities?

Part III

This part provides an opportunity for you to express your views and concerns on matters related to launch liability, risk management and government policies in support of the U.S. commercial space launch industry. You are welcome to use this opportunity to inform the FAA of your views regarding U.S. commercial space transportation in general, and the government's role in facilitating and supporting commercial access to space and regulating launch safety.

Issued in Washington, DC, on _____, 2001.

Joseph A. Hawkins
Acting Associate Administrator for
Commercial Space Transportation

